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ABSTRACT

This evaluation study outlines the needs, rationale, historical background, and operations of the Title I Child Development Project (1965-72). The 1971-72 Project is described and evaluated; implications of key findings are discussed. The major emphasis of the 1971-72 school year focused on staff development through inservice workshops. It is recommended that (1) the project and (2) focus on staff development be continued, (3) there should be an objective systematic classroom schedule to monitor what is happening in the classroom, and (4) teachers' requests to continue to work with teacher consultants should be granted. Appendices list child development centers, tests used in the study, and summaries of teachers' and parents' responses to questionnaires. (DO)

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CHILD DEVELOPMENT PROJECT

TITLE I FUND

FUND NUMBER 58-3

1971-1972 EVALUATION

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THE 1971-1972 EVALUATION REPORT OF CHILD DEVELOPMENT PROJECT WILL ATTEMPT TO RESPOND TO THE FOLLOWING QUESTIONS:

1. WERE THERE SIGNIFICANT CHANGES IN CHILDREN'S ACHIEVEMENT AT THE END OF PROJECT PARTICIPATION?

2. ARE THERE EVIDENT DIFFERENCES IN GROUPS TESTED OVER AN EIGHTH-MONTH AND OVER A FIVE-MONTH PERIOD?

3. WHAT ARE THE IMPRESSIONS OF PROJECT STAFF?

CHILD DEVELOPMENT PROJECT

I. INTRODUCTION

The Title I Child Development Project is a comprehensive change-oriented social-educational program designed to intervene meaningfully into the lives of 'poor' preschool children and their families. Its intent is to improve their educational, social, and health potentials, which would enable them to enter formal school system better prepared than they would have been otherwise.

A. Needs and Rationale

The need for early educational intervention into the lives of disadvantaged children has been well documented. The impact of cognitive and language development during the first five years of life on later personality and intellect has been supported by recent studies (Bloom, 1964) citing the crucial importance of early environment in the development of the child. While these years represent a critical period for all children, they are particularly critical for children from areas of economic and social deprivation where experiences are restricted and development is likely to be retarded.

The Title I 1971-1972 Child Development Project represents continuing local efforts to provide a comprehensive program of education and supplementary social services for preschool children from backgrounds of poverty. The concept of the Project calls for drawing skills from the professional, the family, and the community which will make a meaningful contribution to the

total development of the child. The Project draws heavily on the professional skills of persons in education, medical, dental, psychology, social work, and speech therapy services. It recognizes the family as basic to the child's total development and the critical role of parents to participate in the educational experience of their children at kindergarten.

The goal of the Title I Child Development Project continued to help preschool children acquire basic learning skills necessary for formal school experiences through the provision of enriched and stimulating experiences in preschool classes. The Project continued to have the same unique Project components initiated seven years ago including the addition of a teacher assistant per classroom, integration of comprehensive supportive services into the total program of instruction, maximal parent involvement, use of college male students and auxiliary staff to assist in the classroom under teacher's direction. The implementation of Toy Lending Library Centers in two centers represented a new component during this year.

The focus on staff development initiated during the 1970-1971 school year, was continued. A series of staff development sessions for the teaching staff, supportive services and auxiliary staff were carried out during the 1971-1972 school year to accomplish the following objectives:

- To increase staff awareness of the learning processes.
- To increase staff competencies in enhancing the learning potentials of pupils.

- To assist staff become more cognizant of the contribution of their respective roles to the total learning process.

The product objectives are as follows:

1. Project participants will evidence higher level of readiness skills at the end of the year as compared to observed performance at entry.

2. Children with parents making greater use of the Toy Lending Libraries will evidence higher gains in readiness skills than those whose parents make lesser use of these facilities.

3. Children will show higher self-esteem, based on teachers' ratings at entry and at the end of the school year.

4. Teachers will evidence the following behaviors during the 1971-1972 school year:

   - Teachers will evidence greater understanding of the mental, emotional, social, and physical development of the child at the end of the year.

   - Teachers will become more aware and sensitive to the relevance of self-evaluative devices and techniques in raising their level of competence.

   - Teachers will evidence greater understanding of the contributions of auxiliary staff to their role as classroom teachers.

The following process objectives guided Project implementation:

1. Approximately thirty (30) in-service meetings will be scheduled for teachers and teacher assistants to increase their effectiveness in the classroom.

2. Toy Lending Library Centers will be established in five designated Child Development Centers to encourage parents to borrow instructional materials for their children.

3. A teacher assistant will be assigned to each classroom to assist the teacher in management, clerical, and instructional activities.

4. College male students will be assigned per classroom to serve as male models and to assist the classroom teacher.

5. Parents' support and involvement in the school experiences of children will be encouraged and reinforced by the teacher-social worker team through such activities as periodic classroom visitation, volunteering in the classroom, classroom conferences, workshops, etc.

6. Health, maintenance, and nutritional needs of children will be strengthened through periodic meetings with supportive service personnel such as the nurses, dental hygienists, social service staff and their assistants.

B. Historical Background[1]

The Title I Child Development Project was an outgrowth of the original Head Start Program created in February 1965 under the Office of Economic Opportunity Act of 1965. The original program was implemented in five Centers and served a total of 140 preschool children. During the 1965-1966 school year, the OEO-funded Head Start Program was expanded to 12 Centers and served approximately 400 children.

The Head Start Program operated under OEO-funding until February 1966 when it was transferred to Title I. The Project was renamed as Child Development Project, but the name was retained for the summer OEO-funded preschool program. Approximately 1,700 children were served by the Project during the 1966-1967 school year, as Centers were expanded from 12 to 37. Mean-

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[1] Refer to Appendix A for list of Child Development Centers from 1965 through the 1971-1972 school year.

while, Head Start Programs under OEO-funding continued to operate during the six-week summer program until its termination in August 1969.

During the 1967-1968 school year, the Project was expanded from 37 to 39 Centers with approximately 1,500 children receiving services. This represented the first year when services were provided to participants for the full school year. Services in the previous years were limited only to a semester or 19 weeks as children served in the first semester were not served in the second semester.

The following year the Project was expanded from 39 to 40 Child Development Centers with approximately 1,774 participants receiving services. During the 1970-1971 school year the Project was expanded from 40 to 43 Centers, with approximately 1,887 children receiving services. The operating 43 Centers increased to 45 Centers during the 1971-1972 school year.

Findings from evaluation studies of the Project for the last six years are summarized below:

- Project participants showed significantly higher level of basic readiness and social competency skills at the end of the year as compared to level of performance at the beginning of the year.
- At entry to kindergarten, Project participants evidenced higher level of readiness skills than did children with no comparable preschool experiences.
- At the end of kindergarten, Project participants continued to show higher level of performance than did children with no comparable experiences but differences between the two groups began to diminish.

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- Project participants continued to show higher attendance than did children with no comparable preschool experiences at the lower primary grades.

C. Summary of Operations

The Child Development Project served approximately 1,887 children in 45 Centers. Average daily membership was estimated at 1,670 pupils. The total expenditure was $1,176,711 or $705 per child.[1] Comparison of the Project's per-pupil expenditure with similar projects under Title I or Disadvantaged Pupil Program Fund funding indicated the following:

- Project expenditure per pupil represented only 46% of the Pre-Primary Project for Special Education Children per-pupil expenditure.
- Project expenditure per pupil represented approximately 26% higher than the Kindergarten Enrichment Project per-pupil expenditure.[2]

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[1] Expenditure per pupil based on average daily membership of 1,670 participants.

[2] Based on estimated $521.00 educational cost per-pupil representing both Disadvantaged Pupil Program Fund and general funds.

II. HIGHLIGHTS OF FINDINGS

A. Summary of Key Findings

The 1971-1972 Child Development Project continued to be generally effective in helping children acquire basic learning and readiness skills. The following key findings were noted:

1. Participants evidenced significantly higher level of readiness skills ($p<.01$) at the end of the school year as compared to performance at Project entry (Table A) regardless of whether time span between test-retest administration was 8 1/2 months (Group I) or 4 months (Group II), based on performance on Test of Basic Experiences (TOBE).

TABLE A

CORRELATED t-TESTS FOR PRE-POST DIFFERENCES IN MEAN STANDARD SCORES BY GROUP

TOBE Subtest	Group I			Group II		
	October 1971	May 1972	t	January 1972	May 1972	t
General Concepts	42.00	56.30	7.53*	47.53	61.40	13.06*
Language	42.27	56.59	10.21*	46.51	58.62	12.97*
Mathematics	42.15	54.85	7.94*	45.08	58.36	13.13*

* $p<.01$

2. Mean gains for the three measures were generally comparable for both Groups (I and II) as noted below:

Subtest	Group I	Group II
General Concepts	14.30	13.87
Language	14.32	12.11
Mathematics	12.70	13.28

This finding indicated attainment of the following product objective: Project participants will evidence significantly higher level of readiness skills at the

end of the year as compared to observed performance at entry. However, it could not be ascertained whether the observed gains are solely a function of Project participation or maturation, in view of the absence of a control group.

3. Growth in readiness skills appeared to be consistently greater among children whose parents made 'more frequent' use (Group X) of the Toy Lending Libraries as compared to those whose parents made 'less frequent' (Group Y) use of these facilities (Table B).

TABLE B

MEAN STANDARD SCORES OVER A FOUR-MONTH PERIOD BY SUBTEST

Test of Basic Experiences	Group X*			Group Y*		
	January 1972	May 1972	Gain	January 1972	May 1972	Gain
General Concepts	47.25	62.05	14.80	47.81	60.75	12.94
Language	45.30	58.43	13.13	47.72	58.81	11.09
Mathematics	45.00	58.34	13.34	45.16	58.38	13.22

* 'More frequent' criteria based on average visit of eight or more for Group X parents. 'Less frequent' criteria based on visits of seven or less for Croup Y parents.

This finding indicated attainment of the second product objective: Children with parents making greater use of the Toy Lending Libraries will evidence higher gains in readiness skills than those whose parents make lesser use of these facilities.

4. Participants evidenced significantly higher self-concept ratings ($p < .01$) at the end of the school year as compared to ratings at entry, regardless of whether time span was 8 1/2 months (Group I) or 4 months (Group II), based on teachers' ratings on a five point self-concept scale.

	Group I			Group II		
	10/71	5/72	t	1/72	5/72	t
Self-Concept Rating	3.11	3.70	5.00	3.38	3.84	6.38

This finding indicated attainment of the third product objective: Children will show higher self-esteem, based on teachers' ratings at entry and at the end of the school year. However, in the absence of a control group with which to compare gains, one could not ascertain whether these gains are within or below expectancy.

5. Comparison of two classes within Groups I and II, on readiness and self-concept measures, indicated differences were highly significant (Table C).

TABLE C

SUMMARY OF MULTIVARIATE F-VALUES FOR COMPARISONS OF INDIVIDUAL PAIRS OF TEACHERS BASED ON FOUR DEPENDENT VARIABLES

Teacher Comparisons	Teacher Holding Advantage	Multivariate F-Value	p
Group I			
Teacher A Vs. B	B	55.22	$p < .0001$
Group II			
Teacher C Vs. D	D	34.25	$p < .0001$

Failure of this report to include some description of the classroom processes which may in part explain for the marked variability in classroom performance represents a major weakness of this report. An objective systematic assessment of the classroom processes would have identified those component or components which could be specifically related to children's performance. Any information which could be obtained through classroom observations describing transactions between children, between children and adults, would no doubt maximize the likelihood of abstracting those significant dimensions of behavior, (such as performance in readiness measures) affected by events occurring within the classroom. The development and inclusion of a systematic classroom observation device in future assessment of this Project is strongly recommended.

6. Project participants received comprehensive supportive services during the school year, based on the following recorded data:

   - Approximately 1,675 children (unduplicated count) received a variety of medical-dental services ranging from general physical examinations to referrals to other community health agencies.

   - Approximately 265 children received psychological services ranging from consultation with teachers of referred youngsters to psychological evaluation.

   - Approximately 225 children received social work services.

- Approximately 80 to 90 participants benefitted from Toy Library Centers at Giddings and Dike, which enabled parents to borrow books and materials for their children.

- Opportunities were created for parents of participants to get involved with the educational experiences of their children by developing parent programs revolving around their interests, and through parent's participation in the city-wide Parents' Advisory Committee activities.

These recorded services, no doubt, help prepare these youngsters to meet the challenge of formal school experiences. These youngsters have had medical-dental checkups, psychological evaluations and social work contacts, their parents could not have afforded on their own. Parents'personal contacts with the school, as well as the comprehensive supportive services made available may have alleviated some possible impediments to learning.

7. Teachers' questionnaire responses indicated increasingly greater awareness of the child's unique needs and of the importance of contributions of the auxiliary staff to her role as a classroom teacher. The following key points were noted:

   - Nine out of every ten teacher respondents indicated some modifications in their teaching style through more frequent efforts at the privilege of individualized instruction.

   - Individualized instruction was provided through more effective utilization of the skills of supportive service and auxiliary staff, more creative use of materials and use of the classroom 'learning centers.'

   - Greater understanding of the child's needs was indicated through greater awareness of the value of diagnosis and responding educationally to diagnosed need.

These findings indicated attainment of the following product objective: Teachers will evidence greater understanding of the total development of the child as well as the importance of the contribution of the auxiliary staff to their role as classroom teachers.

8. Assessment of sustained value of Project participation at kindergarten through fourth grade indicated varying findings from grade to grade and from subtest to subtest (Table D).

TABLE D

SUMMARY OF FINDINGS IN FOLLOW-UP STUDIES OF ACHIEVEMENT AND ATTENDANCE (KINDERGARTEN THROUGH FOURTH GRADE): NO PRESCHOOL VS. PRESCHOOL

Dependent Variable	Grade	Number Title I Schools	Group Holding Advantage
Metropolitan Readiness Tests (MRT)			
MRT Word Meaning	Kin-	2	No Preschool
MRT Listening, Matching, Alphabet, Numbers, and Copying	der-		No Difference
Stanford Early School Achievement, Attendance	gar- ten		No Difference
Stanford I: Reading-Math, Attendance	1	3	No Difference
Gates-MacGinitie Reading, Attendance	1	17	No Difference
Stanford II: Reading, Attendance	2	2	No Difference
Stanford II: Computations			No Preschool
Stanford II: Concepts			With Preschool
Stanford II: Reading-Math, Attendance	3	2	No Difference
Comprehensive Test of Basic Skills (CTBS): Reading-Math	4	3	No Difference

These findings would appear to raise questions about the durability of the immediate visible positive effects of Project participation. The reader is cautioned to refrain from this type of oversimplification. The most obvious problems associated with this type of assessment are obvious: Assessment of sustained value of Project participation can be studied with precision only when there is some control over the influence of the intervening period so as to provide assurances that differences in the designated criteria may be attributed to participation in this particular Project. Preschool experience is not unitary as it interacts with a variety of school and non-school experiences. The more remote the experience is, the more difficult it becomes to attribute anything to such experience as they become compounded by other variables.

9. Assessment of unique Project components by the teachers based on questionnaire responses, indicated that the addition of a teacher assistant per classroom represented the most effective component. Components like parent involvement and availability of psychological services were described by teachers as follows:

   - Difficulty in maintaining a sustained level of parent involvement throughout the school year represented a problem. Parent activities appeared to peak between September to December, and then began to decline.

   - Dissatisfaction with psychological services appeared to stem primarily from a shortage of psychologists who could provide immediate service, rather than from quality of available psychological services.

B. Implications and Recommendations

The Title I Child Development Project continued to be effective in providing a comprehensive program of education and supplementary social services to preschool children coming from a poverty background. Project participants demonstrated significant growth in readiness skills at the end of the school year. Furthermore, a record number of participants received comprehensive supportive social services that they would not have received without participation in this particular Project.

The most positive argument for Project participation is that it helps prepare children to meet the challenge of formal school experiences. It makes the transition from the home to the school less traumatic, as children are gradually helped to adjust to the classroom situation. The value of this Project, in terms of its impact on parents and neighborhood residents, is worth noting also. Its concept of employing neighborhood residents and parents as paid auxiliary staff, and its influence on parents in helping them to become effective partners of the school in the educational experience of their children, no doubt, represented equally valuable Project contributions although they were not measurable.

Need for Objective Assessment of Classroom Objective Variables: Although gains in readiness skills and self-concept measures were significant ($p < .01$) over time, the absence of controls continues to be a nagging question. Could these gains have

occurred anyway, without the experience provided by the Project? Could one ascribe growth to maturation as most researchers had speculated?

The evidence of marked variability in performance between classrooms (or Centers or teachers) further complicates the issue. Failure to include a description of classroom processes and its obvious focus on significant pre-post change, no doubt, represents a major shortcoming of this report.

Changes in readiness skills and self-concept represents only two of numerous changes resulting from participation in a Project like Title I Child Development. Change could range from readiness and self-concept, for example, to language comprehension, curiosity, mastery of materials, attitude toward school and relatedness to peers, dramatic change in parent attitude, to mention a few. Whichever change is being measured represents only a fragment of possible effects produced by participation in Title I Child Development Project.

The need to shift the evaluation strategy should be strongly considered. Assessment of pre-post change especially in the absence of controls, leaves much to be desired. Assessment efforts must include looking at process variables in the classroom as well as looking at change in pupil behavior. Systematic monitoring of the process variables within a classroom and relating such information to a criterion (such as readiness or self-concept growth) will lend comprehensiveness to evaluation efforts. An assessment of the degree of implementation of the

open classroom approach, for example, could be a good start. How often are the learning centers actually utilized? Are gains in the designated criterion a function of differences in degree of implementation and application of the responsive open classroom approach? Would the more flexible, more 'open' approach of teaching style be more conducive to the development of curiosity and divergent thinking of participants, as its proponents had hypothesized?

The development of a systematic classroom observation device to monitor process variables within a classroom could not be overstated. Such a devise would provide tangible objective data on transactions occurring between children, between children and adults, and for that matter, between adults also. Such information would maximize the probabilities of abstracting those significant dimensions of behavior affected by identifiable classroom events.

Survey of Staff on Project Components: Staff's positive reactions about the contributions of the supportive services as well as skills of auxiliary staff to the instructional component suggest a balanced program of instruction and supportive services. Over the years of Project operation, there appeared to have been increasing rapport and respect between the different professions involved, with increased understanding of roles and contributions.

The comprehensive supportive services made available to participants would not have been at all possible, without

Title I Child Development Project. The costs would be too prohibitive for the parents, who may not even have understanding at the importance of such services at this critical age. Opportunities for parents-staff contacts and the delivery of medical-dental, psychological-social work-speech therapy services, may have some positive effects on the participants, in terms of alleviating some possible impediments to learning.

Recommendations: The following recommendations are offered:

1. The Title I Child Development Project should be continued.

2. Focus on staff growth and development through in-service meetings and workshops, should be continued.

3. The Project should consider the use of an objective systematic classroom schedule to monitor what is going on in the classroom. Such devices could be locally developed using variables considered important by the Project, using either personal observers who may be Project staff or non-staff members, or using video-tape equipment which could be observed by three to four observers at certain periods of the year.

4. Teachers' requests for continuing work with teacher consultants along the following designated areas should be noted: implementation and use of learning centers, assistance in the use of new techniques and new materials, assistance in lesson planning, assistance in developing instructional strategy for the above-average and the below-average.

III. PROJECT DESCRIPTION

The Child Development Project served a total of 1,887 children who attended 90 classes at 45 Child Development Centers. The Project operated two sessions daily, a morning and an afternoon session. The morning session was held from 9:00 A.M. to 11:30 A.M.; the afternoon session was held from 1:30 P.M. to 3:30 P.M. Children attended either one of these two sessions for four days weekly, Tuesday through Friday. The remaining day was devoted to staff development and parent involvement activities.

The major emphasis during the 1971-1972 school year continued to focus on staff development through in-service workshops. Other unique Project components continued to include the following:

- Addition of one teacher assistant per classroom.
- Use of college male students in the classroom.
- Addition of instructional supplies and equipment.
- Maximal and meaningful parent participation.
- Comprehensive supportive services.
- Use of Teacher Consultants.

A. Participant Characteristics

Participants evidenced the following characteristics:[1]

- Mean chronological age of 63 months (5 years and 3 months) at the end of the school year.
- Participants were functioning below expectancy in readiness skills, based on performance on Test of Basic Experiences.

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[1] Based on evaluation sample.

- Majority of participants were immature in their social skills.
- Majority of participants suffered from nutritional, medical, and dental deficiencies.
- Majority of participants were coming from families considered to be 'poor,' based on guidelines established by the Office of Economic Opportunity.

B. Project Operations

The program of instruction focused on the development of the three domains - cognitive, affective, and psychomotor. Chart I presents a broad outline on techniques or program activities utilized to enhance the development of these areas.

Opportunities for enhancing self-concept and developing language communication skills were integrated into the total program. For example, in an effort to improve child's concept of one's self, participants were involved in structured situations which resulted in successful personal accomplishments. Efforts were made to develop each child's confidence in himself as a person with individual likes and dislikes through music, art media, rhythms, play equipment, and various materials. Stories and verse which helped contribute to speech and vocabulary development were utilized frequently. Children were encouraged to retell stories and to "play the stories" with simple costume effects such as a hat, a wand, or animal ears. Classroom libraries were augmented by neighborhood libraries. Recordings of songs and verse were available.

To provide impetus to language development, dramatic play was utilized as a media. Play, corresponding to daily life

CHART I

CURRICULAR OBJECTIVES

Domain	Selected Examples of Objectives and Instructional Strategies
Cognitive	Developing conceptual skills: . Naming an object, its parts or its functions . Describing an object, its parts or its functions . Classifying objects as members of a particular category . Placing episodes of events in correct sequence . Remembering and relating facts about some event . Building conservation judgment . Establishing serial ordering Developing language and communication skills: . Building vocabulary repertoire . Using complete sentences . Developing verbalization . Following directions contingent on relational words . Retelling stories and verse . Recalling sights, sounds and experiences Developing auditory perceptions: . Identifying common sounds to get meaning . Imitating sounds and relating them to source . Contrasting sounds . Following directions Developing visual perception: . Identifying familiar objects . Distinguishing positions in space . Recognizing and contrasting shapes and sizes . Describing story events Developing tactile and olfactory perception: . Identifying and naming color, and shades of color . Becoming aware of texture, degrees of being soft, hard, smooth, rough, hot or cold . Identifying tastes -- sweet, sour, bitter or salty
Affective	Broadening social skills: . Group participation . Taking turns . Sharing . Responding to group limits . Responding to absence of group limits Developing and sustaining positive self-concept: . Generating feelings of success with all learning . Building positive identification of school . Creating a realization of individual uniqueness . Developing confidence in his ability to perform

CHART I (CONTINUED)

CURRICULAR OBJECTIVES

Domain	Selected Examples of Objectives and Instructional Strategies
Affective	Developing and sustaining positive attitudes about others: . Respecting rights of others . Relating to peers . Relating to adults
Psychomotor	Developing visual motor coordination physically: . Catching and throwing balls . Tossing bean bags . Rolling or catching a tire or hoop . Running, galloping, hopping, skipping and jumping . Bending, climbing, touching and developing eye movement Position in space: . Developing awareness of parts of the body . Completing partially drawn figures . Relating the body to other objects Developing spacial relationships: . Using three dimensional objects to locate positions in front of, on top, behind . Matching patterns Figure-ground perception: . Discriminating objects in the room . Distinguish objects that are different . Sorting according to color, size and shape Perceptual constancy: . Finding the same size . Finding different sizes . Finding the same shape . Finding different shapes . Sorting according to size and shape Large muscle control: . Climbing stairs and ladders . Walking balance beam . Stepping through hoop . Teetering . Dodging ball . Jumping rope

activities, such as caring for dolls, using toy telephones, operating and controlling both large and small wheel toys, and building block structures, was arranged for individual children, pairs, and small groups. Throughout all dramatic play experiences, observation of the speech patterns of pupils was made in order to plan the direction for further speech development of individual children.

Trips geared to the child's maturity level and related to classroom instruction were made regularly to help participants understand and enjoy the real world. Planning discussions before trips were held to encourage children to talk and think about the anticipation of things to be seen and heard. During the trip, constant interpretation and feedback were provided by the adults. Time was provided to allow children to recall sights, sounds, and experiences after each field trip.

Provision of 'learning centers' in the classroom represented the media for instruction. Each 'learning center' in the classroom was provided with a variety of discovery ideas, problems to be solved, and instructional materials which taught and extended many concepts. Extended periods of uninterrupted time were allowed for children to manipulate, cope with and learn from the activities in which they participated. The teacher assumed the role of facilitator of learning, the problem poser, and the programmer of the classroom environmental stimuli. The auxiliary staff (teacher assistant, tutor, and volunteer) under the teacher's direction, helped implement this unique style of instruction.

C. Staff Development

Approximately 11,000 hours were utilized in in-service training, with 83 professional and 79 auxiliary (paraprofessional) staff involved. Staff development was initiated prior to the opening of the school year in early September, through the pre-service orientation sessions.

Staff development centered on the provision of four 'mini-courses' in consultation with Dr. P. Safford of the Education Department of Case-Western Reserve University. These courses focused on the following topics:

- Developmental sequence and pacing of learning at ages 4 through 6.
- Recognition and diagnosis of specific instructional and psycho-social needs in individual children.

Each mini-course consists of a two-hour workshop, and was organized around a theme. Each mini-course was presented as a unit to each of four groups of participants. Each unit (or package) consisted of behavioral sequences involving young children presented via videotape, which carried out major aspects of the unit theme; some explanatory discussions, presented orally on tape, or through mimeographed handouts, as well as suggestions for related reading.

The theme of the mini-courses was as follows:

- Discovering (questioning, information-seeking, problem-sensing, exploring).
- Coping (playing - levels, forms, and functions; verbalizing and mastering).

- Thinking and Learning (Concept formation, logical thinking and pre-logic, symbolic functioning action, thought and language).

- Identifying and Becoming (self image, self and others, identification and the teacher, competency and self-esteem).

In addition, regular in-service workshops were scheduled monthly for the Child Development staff in small group sessions. Some of the topics discussed in these sessions included the following:

- Role of the Psychologist.
- Glaser Approach.
- Parent Involvement.
- Management of Children.
- Use of New Materials.
- Use of Music Rhythms in the Classroom.

D. Parent Involvement

The Project continued to enlist parents' participation in the learning experiences of the participants in different capacities. Parent involvement occurred at the following levels:

- At the upper echelon level, among the elected membership of Parents' Advisory Committee (PAC).

- At the grassroots level, among parents of children as they participated in a variety of activities.

Membership in the PAC is elected representatives for each school, with two parents in the morning session and two parents in the afternoon. These elected representatives participate in PAC meetings, and share information from these meetings with the other parents in the school represented, as well as to serve as consultants to the Division of Early Childhood Education.

Approximately 185 parents from this Project served as representatives to the city-wide Parent Advisory Committee:

- An average of 40 parents attended the PAC monthly meetings for nine months, with each meeting lasting for two hours.
- An average of five to ten parent representatives participated in eight planning meetings, with each meeting lasting for 1 1/2 hours.
- Approximately 538 parents were involved or visiting 45 Centers.

To foster meaningful participation of parents in the Project, parents were encouraged to be involved in the following activities:

- Classroom visitations.
- Conferences with staff.
- Volunteer participation.
- Participation in planning and advisory committees.
- Participation in parents' sessions at school.
- As a paid staff person.

Parents helped promote programs in the different centers, in an effort to develop programs that had greater relevance for them. Parents' programs represented a variety of interests, ranging from craft sessions to discussions on child development. Some of the activities utilized by the Project to enlist more participation were as follows:

- Speakers and Discussion groups.
- Federal housing authority; consumer information, safety education, drugs, child molesters, sex education, child growth and development, and rap sessions.
- Workshops.
- Classroom learning aides, activities, crafts, homemaking ideas, beauty clinics, style shows.

- Bus trips, community resource tours, exchange visits between schools, combined school activities.

- Special event activities.

- Holiday celebration and parties, pot luck meetings, bake sales, fund raising activities for specific projects.

- Visual aids.

- Participation in community and neighborhood concerns (i.e., proposal for a recreation center at the King-Kennedy Estates).

E. Supportive Services

Integration of comprehensive supportive services into the total program represented an important Project component. Services provided by each component are described below:

Medical Services:	Number Children Receiving Services
Weighed and Measured	1,441
Physical Examinations	1,287
Tuberculin Testing	1,101
Vision Screening	1,967
Vision Referrals to Clinic	129
Hearing Referrals to Clinic	68
County Clinic Referrals	3
Referrals to Private Physicians	88
Hospital Out-Patient Referrals	231
Referrals to Immunization Clinics	1,675
School Immunization Program	1,038
Referrals to Well Baby Conference	253
First Aid Preschool	563
Referrals	42
Speech and Hearing	7
Free Clinic	1
Podiatry Clinic	16
Reading Class Wt. Program	17

In addition, nurses provided health information to parents in meetings and children in the classroom.

Psychological: Approximately 265 children received psychological services.

Social Work: Approximately 225 children received social work services.

IV. EVALUATION

The 1971-1972 evaluation of the Child Development Project was designed to assess the immediate impact of Project participation over a nine-month period and to determine the long-term value of Project participation. This report will attempt to answer the following questions:

- Were there significant changes in children's achievement at the end of Project participation?
- Are there evident differences in groups tested over an eight-month and over a five-month period?
- What are the impressions of Project staff?
- Are there additional factors influencing achievement following Project participation?
- What is the sustained value of Project participation?

(For a detailed description of different test measures in this evaluation study, please refer to Appendix B-1).

A. Basic Design

1. Assessment of Change Over A Nine-Month Period

Two groups of children were tested on the Test of Basic Experiences (TOBE) General Concepts, Language, and Mathematics subtests. The time of pre-testing differed for the two groups, although, both were post-tested at the same period. The two groups were tested as follows:

Group I consisted of 47 randomly selected participants from two centers who were tested over an eight-month period (October 1971 to May 1972).

Group II consisted of 82 randomly selected participants from two centers who were tested over a five month period (January 1972-May 1972).

Data were subjected to the correlated t-tests to assess level of significance of change.

2. Assessment of Effects of Different Factors on Achievement and Self-Concept Measures

A three-factorial (Sex x Time x Teacher) multivariate analysis of covariance cross-nested design served as the model:

Sex
- Girl
- Boy

Time
- Group I
- Group II

Teacher
- A, B — Group I
- C, D — Group II

The dependent variables included scores on these measures administered in May 1972:

- TOBE General Concepts
- TOBE Language
- TOBE Mathematics
- Self-Concept Rating

The independent variables included scores on the indicated test measures obtained in October 1971 for Group I and in January 1972 for Group II. (See list of dependent variables). In addition, chronological age of children in the sample at the end of the school year was utilized as an independent variable.

3. Assessment of Effects of the Five Independent Variables on the Four Dependent Variables

A multiple and step-wise regression analysis were run to evaluate the contribution of the five independent variables to the variance of the four dependent variables.

4. Assessment of Sustained Value of Project Participation

Assessment of long-term value of Project participation was made by looking at the effects of Child Development experiences in two projects:

- House Education Welfare (HEW) Follow-Through Project from kindergarten through third grade, as well as at fourth grade 'in transition' and seven control schools.
- Reading Impact Project, consisting of first grade classes located in 17 Title I schools.

Multivariate analysis of covariance 2 x 2 x 2 x 2 (Sex x Economic Status x Preschool Experience x Treatment) designs were run to look at effects of preschool experiences in these programs.

B. Presentation of Findings

Findings are briefly summarized below as follows:

- Participants evidenced significant growth in readiness skills and self-concept, regardless of the span of time between test administrations.
- Differences in gains between children tested over a nine-month period compared to those tested over a five-month period were not significant.
- Teacher differences based on classroom performance for either group were highly significant.

- The best predictors of performance at the end of the school year included scores on General Concepts, Language, and Self-Concept Rating at entry.

1. Assessment of Change Over A Nine-Month Period

This discussion will attempt to respond to the following questions: Were there significant changes in basic readiness skills and self-concept ratings at the end of Project participation? Are gains made over a five-month period comparable to those made over a nine-month period?

The Child Development Project was successful in raising the level of readiness skills over a nine-month period. Table 1 presents the pre-post mean standard scores for each subtest by group. The following key findings were noted:

- Both groups evidenced significant gains ($p < .01$) on the TOBE General Concepts, Language, and Mathematics subtests.
- Four classes under Teachers A, B, C, and D demonstrated marked growth ($p < .01$) on the TOBE subtests.

Teachers' perceptions of children's self-concept, based on their self-concept ratings also evidenced significant positive increases (Table 2).

2. Assessment of Effects of Different Factors on Readiness and Self-Concept Measures

This discussion will attempt to answer the following questions: Are main effects of Sex, Time, and Teacher factors significantly evident on readiness and self-concept measures? Are there any evident significant interaction effects between these factors?

TABLE 1

CORRELATED t-TESTS FOR PRE-POST MEAN SCORE DIFFERENCES
BY TOBE SUBTEST BY GROUP*

Group	General Concepts			Language			Mathematics		
	Pre-Test	Post-Test	t	Pre-Test	Post-Test	t	Pre-Test	Post-Test	t
Group I	42.00 (7.97)	56.30 (17.15)	7.53**	42.27 (12.24)	56.59 (7.46)	10.21**	42.15 (9.62)	54.85 (15.54)	7.94**
A	37.39 (5.37)	42.07 (5.70)	3.55**	33.82 (6.87)	42.89 (5.88)	6.80**	36.27 (7.11)	42.24 (5.45)	4.45**
B	48.00 (6.74)	74.80 (4.14)	18.36**	54.74 (6.06)	76.79 (2.17)	12.89**	49.80 (6.59)	71.25 (5.67)	11.11**
Group II	47.53 (7.19)	61.40 (8.59)	13.06**	46.51 (8.58)	58.62 (8.47)	12.97**	45.08 (6.50)	58.36 (8.74)	13.13**
C	47.41 (6.15)	58.76 (6.82)	9.73**	44.16 (8.51)	57.11 (6.99)	9.40**	44.89 (6.31)	60.14 (9.08)	10.12**
D	47.64 (8.03)	63.59 (9.35)	9.82**	48.54 (8.20)	59.93 (9.46)	8.94**	45.25 (6.75)	56.73 (8.18)	8.73**

* Figures inside parenthesis represent standard deviations.

** $p < .01$

TABLE 2

CORRELATED t-TESTS FOR PRE-POST MEAN RATING DIFFERENCES ON SELF-CONCEPT RATINGS BY GROUP

Group	Pre	Post	t
Group I	3.11 (0.86)	3.70 (0.62)	5.00*
A	2.66 (0.63)	4.00 (0.57)	15.10*
B	3.58 (0.88)	3.40 (0.53)	0.98
Group II	3.38 (0.99)	3.84 (1.02)	6.13*
A	2.73 (0.57)	2.96 (0.58)	3.36*
B	4.03 (0.88)	4.70 (0.45)	5.57*

* $p < .01$

- Both groups evidenced significant increases in self-concept based on teachers' perceptions.
- Three out of four classes were rated by teachers to show growth in self-concept.

To summarize briefly, participants made significant gains ($p < .01$), regardless of time span between test administrations and regardless of their teacher.

- Time Factor appeared to show no significant influence on children's readiness skills.

- Teacher Factor appeared to have a significant influence on children's readiness skills.

- Sex appeared to have no influence on children's readiness skills.

- Interaction effects between these three factors did not meet level of significance.

Time Factor: Differences in performance on the measures between Groups I and II children were negligible when post-scores adjusted for initial scores and chronological age were utilized in the analysis. These findings appear to indicate comparable scores for both groups in readiness skills and in self-concept at the end of the nine-month Project participation.

Teacher Factor: Teacher factor evidenced significant influences on readiness scores and self-concept ratings for both Groups I and II. A summary of multivariate F-Values for teacher comparisons (Table 3) indicated differences were highly significant ($p < .0001$).

TABLE 3

SUMMARY OF MULTIVARIATE F-VALUES FOR COMPARISONS OF INDIVIDUAL PAIRS OF TEACHERS BASED ON FOUR DEPENDENT VARIABLES

Teacher Comparisons	Teacher Holding Advantage	Multivariate F-Value	p
Group I			
Teacher A Vs. B	B	55.22	$p < .0001$
Group II			
Teacher C Vs. D	D	34.25	$p < .0001$

Tables 4 and 5 present comparisons of teachers for Groups I and II.

TABLE 4

ADJUSTED MEAN SCORES AND STEPDOWN F-VALUES: TEACHER A VS. B FOR GROUP I

Dependent Variable	Teacher A	Teacher B	Stepdown F
TOBE General Concepts	46.79	71.91	105.89*
TOBE Language	48.17	73.05	16.59*
TOBE Mathematics	47.57	67.53	3.08
Self-Concept Rating	4.39	3.21	35.53*

* $p < .0001$

- Overall group difference was highly significant ($p < .0001$) in favor of Teacher B.
- Children under Teacher B evidenced significantly higher level of basic concepts and mathematics skills than did those under Teacher A. However, children under Teacher A received higher ratings in self-concept than did those under Teacher B.

TABLE 5

ADJUSTED MEAN SCORES AND STEPDOWN F-VALUES:
TEACHER C VS. D FOR GROUP II

Dependent Variable	Teacher C	Teacher D	Stepdown F
TOBE General Concepts	59.07	60.00	0.21
TOBE Language	57.73	57.54	0.13
TOBE Mathematics	60.03	54.35	8.00**
Self-Concept Rating	3.11	4.37	19.90*

* $p < .0001$
** $p < .001$

- Overall group difference was highly significant ($p < .0001$).
- Two out of four dependent variables contributed significantly to the overall group difference: Children under Teacher C evidenced higher level of fundamental mathematical concepts. However, children under Teacher D appeared to demonstrate marked growth in their self-concept, based on their teachers' perceptions.

To summarize briefly, it appears that the most critical variable affecting children's performance was the teacher's influence. Failure to have an objective systematic data representing description of the teaching process as utilized within a given classroom represents a major shortcoming in this report.

3. Effects of Pre-Test Measures and Chronological Age on Achievement and Self-Concept

This discussion will attempt to answer the following questions: To what degree are the dependent and independent variables correlated with one another? Which of the five independent variables is the best predictor of achievement and self-concept at the end of the nine-month Project participation?

A significant degree of relationship was found to exist between the dependent and independent variables: Multivariate $F = 5.97$, $p < .0001$. A total of approximately 18% of the variance of the four dependent variables was found to be attributed to the combined effects of the five independent variables.

Analysis of the contribution of each of the five independent variables indicated that only three variables have significant effects ($p < .0001$) on the dependent variables.

The following key findings were noted:

- The three significant predictors of achievement and self-concept measures included the pre-test measures on General Concepts, Language, and Self-Concept.
- Pre-test scores on General Concepts and Language subtests appear to be a significant predictor of scores to each of the four dependent variables.
- Pre-Self-Concept ratings appear to be a significant predictor of scores on General Concepts and post-Self-Concept Ratings.

To summarize briefly, an overall significant degree of correlation exists between the four dependent and five independent variables. However, only three out of the five independent variables evidenced significant effects on the four dependent vari-

ables when their contribution was analyzed independently. These variables included pre-test scores on General Concepts, Language, as well as pre-self-concept ratings.

4. Assessment of Sustained Value of Project Participation

This discussion will attempt to answer the following questions: What is the sustained value of Project participation? Did Project participation show significant interaction effects with any of the operating programs?

Assessment of long-term values of Project participation was made by looking at the following projects:

- Follow-Through Project at kindergarten, 1, 2, 3, and 4th grades 'in transition' classes and seven control schools.
- Reading Impact Project in 17 Title I schools.

Findings were as follows:

- Differences between children with and without Child Development experiences were generally non-significant.
- In some comparisons which demonstrated significant differences, no consistent trends were noted. Children with or without preschool experiences demonstrated higher performance than the other, depending on the subtest.

a. Project Follow-Through[1]

(1) Kindergarten Follow-Through

A four-factorial multivariate anlaysis of covariance design (Sex x Preschool Experience x Teacher x School) served as the basic design:

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[1] 1971-1972 Evaluation of Project Follow-Through

Sex
- Girl
- Boy

Preschool Experience
- No Preschool Experience
- With Preschool Experience

School
- Control
- Follow-Through

Teacher
- A
- B

Control

- C
- D

Follow-Through

The dependent variables consisted of children's performance at the end of the school year on the following subtests: Metropolitan Readiness Tests (MRT) Word Meaning, Listening, Matching, Alphabet, Numbers, and Copying; Stanford Early School Achievement Test (SESAT) Environment, Mathematics, Letters and Sounds, and Aural Comprehension; Attendance and Self-Concept Ratings. The independent variables consisted of children's performance at the beginning of the school year on the following subtests: Stanford Early School Achievement Test (SESAT) Environment, Mathematics, Letters and Sounds, and Aural Comprehension; Self-Concept Ratings and Chronological Age.

Table 6 indicated that differences between children with and without Child Development experiences were highly significant ($p < .001$), with the most evident differences noted in MRT Word Meaning subtest and Attendance.[1]

TABLE 6

ADJUSTED MEAN SCORES AND STEPDOWN F-VALUES: NO PRESCHOOL VS. PRESCHOOL EXPERIENCE AT KINDERGARTEN*

Dependent Variable	No Preschool	Preschool	Stepdown F
MRT Word Meaning	8.43	7.70	9.01**
MRT Listening	10.73	10.04	0.15
MRT Matching	8.76	10.00	0.25
MRT Alphabet	12.78	13.12	0.86
MRT Numbers	12.39	11.59	2.21
MRT Copying	6.20	5.35	2.74
SESAT Environment	28.40	27.88	0.83
SESAT Mathematics	16.73	16.57	0.05
SESAT Letters and Sounds	17.73	18.30	0.16
SESAT Aural Comprehension	17.18	16.58	0.40
Attendance	159.80	166.50	13.99**
Self-Concept Rating	3.53	3.22	1.13

* Multivariate $F = 2.84$, $p < .001$
** $p < .001$

Two out of 12 dependent variables contributed to the group difference: Children with no preschool demonstrated higher verbal concepts (MRT Word Meaning) than did those with preschool experience. However, children with preschool showed higher attendance than did those with no preschool experience.

[1] Multivariate and Stepdown F-values were based on mean scores adjusted for unequal number of cases and effects of five pre-test measures (Stanford I subtests and self-concept rating).

(2) First Grade Follow-Through

A five-factorial multivariate analysis of covariance cross-nested design (Sex x Economic Status x Preschool Experience x School x Teacher Nested in School) served as the basic design:

Sex
- Girl
- Boy

Economic Status
- Poor
- Non-Poor

Preschool Experience
- No Preschool Experience
- With Preschool Experience

School
- Control
- Follow-Through

Teacher
- A, B — Control 1
- C, D — Control 2
- E, F, G, H — Follow-Through

The dependent variables consisted of children's performance at the end of the school year on the following subtests: Stanford Primary I (Form X) Paragraph Meaning, Vocabulary, Word Reading, and Arithmetic; Self-Concept Rating and Attendance. The independent variables consisted of the following measures: Metropolitan Readiness Tests Total Score; Self-Concept Rating; Chronological Age and Mobility.

Differences between children with and without preschool experiences did not meet significance.

(3) Second Grade Follow-Through

A five-factorial multivariate analysis of covariance cross-nested design (Sex x Economic Status x Preschool Experience x School x Teacher Nested in School) served as the basic design:

Sex
- Girl
- Boy

Economic Status
- Non-Poor
- Poor

Preschool Experience
- No Preschool Experience
- With Preschool Experience

School
- Control
- Follow-Through

Teacher
- A
- B — Control
- C

- D
- E
- F — Follow-Through
- G

The dependent variables consisted of children's performance at the end of the school year on the following subtests: Stanford Primary II (Form X) Paragraph Meaning, Word Meaning, Language, Computation, and Concepts; Self-Concept Rating and

Attendance. The independent variables consisted of children's performance at the beginning of the school year on the following measures: Stanford Primary I (Form W) Paragraph Meaning, Word Reading, Vocabulary and Computation; Self-Concept Rating; Chronological Age; and Mobility.

Table 7 indicated that differences between the two groups were highly significant ($p < .01$) with the most evident difference noted in computational skills.[1]

(4) Third Grade Follow-Through

A five-factorial multivariate analysis of covariance cross-nested design (Sex x Economic Status x Preschool Experience x School x Teacher Nested in School) served as the basic design:

Sex
- Girl
- Boy

Economic Status
- Non-Poor
- Poor

Preschool Experience
- No Preschool Experience
- With Preschool Experience

---

[1] Multivariate and Stepdown F-Values based on mean scores adjusted for unequal number of cases and effects of pre-test measures.

TABLE 7

ADJUSTED MEAN SCORES AND STEPDOWN F-VALUES: NO PRESCHOOL VS. PRESCHOOL EXPERIENCE AT SECOND GRADE*

Dependent Variable	No Preschool	Preschool	Stepdown F
Stanford II Paragraph Meaning	18.84	19.55	0.10
Stanford II Word Meaning	13.16	12.44	0.43
Stanford II Language	26.37	27.75	1.53
Stanford II Computation	19.74	15.24	7.29**
Stanford II Concepts	13.32	15.06	4.81***
Self-Concept Rating	3.41	3.29	3.88***
Attendance	166.30	168.00	0.60

* Multivariate F = 2.78, $p < .01$
** $p < .01$
*** $p < .05$

- Overall group difference was highly significant ($p < .01$)
- However, three out of seven dependent variables contributed significantly to the overall group difference: Children with no preschool experience showed higher level of basic computational skills and higher self-concept than did children with preschool experiences. However, children with preschool experience demonstrated significantly higher level of basic math concepts than did children with no preschool experience.

School
- Control
- Follow-Through

Teacher
- A
- B Control
- C
- D
- E
- F Follow-Through
- G

The dependent variables consisted of children's performance at the end of the school year on the following subtests: Stanford Primary II (Form W) Paragraph Meaning, Word Meaning, Language, Computation, and Concepts; Self-Concept Rating; and Attendance. The independent variables consisted of the following measures: Metropolitan Readiness Tests Total Score; PLR; Stanford Primary II (Form X) Paragraph Meaning, Word Meaning, Language, Computation, and Concepts; Self-Concept Rating; Chronological Age and Mobility.

However, Table 8 indicated that significant interaction effects of economic status, preschool experience and school factors were significant ($p < .01$).[1]

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[1] Multivariate and Stepdown F-Values based on mean scores adjusted for unequal number of cases and effects of pre-test measures.

TABLE 8

ADJUSTED MEAN SCORES AND STEPDOWN F-VALUES FOR ECONOMIC STATUS X PRESCHOOL X TREATMENT EXPERIENCES*

Dependent Variable	Control				Follow-Through				Stepdown F
	Non-Poor		Poor		Non-Poor		Poor		
	No Preschool	Preschool	No Preschool	Preschool	No Preschool	Preschool	No Preschool	Preschool	
Stanford II Paragraph Meaning	31.93	27.89	28.98	28.69	24.97	26.77	24.10	25.50	0.82
Stanford II Word Meaning	16.40	15.81	16.86	14.59	18.16	16.94	17.15	17.20	2.26
Stanford II Language	38.10	32.14	31.33	31.49	31.78	35.68	30.98	29.51	6.32**
Stanford II Computation	33.26	31.24	31.16	28.08	26.28	26.68	22.77	24.93	0.49
Stanford II Concepts	20.56	18.23	19.65	19.64	19.01	17.49	18.39	18.61	0.11
Self-Concept Rating	3.24	3.09	3.09	3.02	3.11	3.08	3.15	2.83	1.82
Attendance	157.40	173.80	166.30	168.50	165.30	163.10	162.30	169.70	5.95**

* Multivariate F = 2.62, $p < .01$

** $p < .01$

- Overall group difference was highly significant ($p < .01$).
- Two out of seven dependent variables contributed to the overall significant difference: Language and Attendance.

(5) Fourth Grade 'In Transition'

A five-factorial multivariate analysis of covariance cross-nested design (Sex x Economic Status x Preschool Experience x School x Teacher Nested in School) served as the basic design:

Sex
- Girl
- Boy

Economic Status
- Non-Poor
- Poor

Preschool Experience
- No Preschool Experience
- With Preschool Experience

School (Treatment)
- Control School 1
- Control Schools 2A and B
- Follow-Through

Teacher
- A, B — Control School 1
- C, D — Control Schools 2A and 2B
- E, F — Fourth Grade Transitional

The dependent variables consisted of children's performance at the end of the school year on the following subtests: Comprehensive Test of Basic Skills (CTBS) Reading Comprehension, Vocabulary, Computation, Concepts, and Application; Self-Concept Rating; and Attendance. The independent variables consisted of the following measures: Comprehensive Test of Basic Skills (CTBS) Reading Comprehension,

Vocabulary, Computation, Concepts, and Application; Stanford Diagnostic Reading; Metropolitan Readiness Tests Total Score; PLR; Self-Concept Rating; Chronological Age; and Mobility.

Differences between children with and without preschool experiences were not significant. However, significant interaction effects ($p < .05$) were noted between preschool and treatment experiences (Table 9).[1]

TABLE 9

ADJUSTED MEAN SCORES AND STEPDOWN F-VALUES FOR PRESCHOOL X TREATMENT EXPERIENCES

Dependent Variable	Control 2		Follow-Through		Stepdown F
	No Preschool	Preschool	No Preschool	Preschool	
CTBS Reading Comprehension	390.00	379.70	398.10	386.40	0.02
CTBS Reading Vocabulary	359.90	367.30	363.70	360.10	0.99
CTBS Computation	390.20	392.90	382.50	370.80	1.34
CTBS Concepts	400.50	382.20	372.50	367.70	3.57
CTBS Applications	382.70	375.20	374.40	374.90	0.65
Self-Concept Rating	2.93	3.18	3.29	3.30	0.36
Attendance	172.40	169.00	160.10	172.90	9.16**

* Multivariate $F = 2.39$, $p < .05$
** $p < .001$

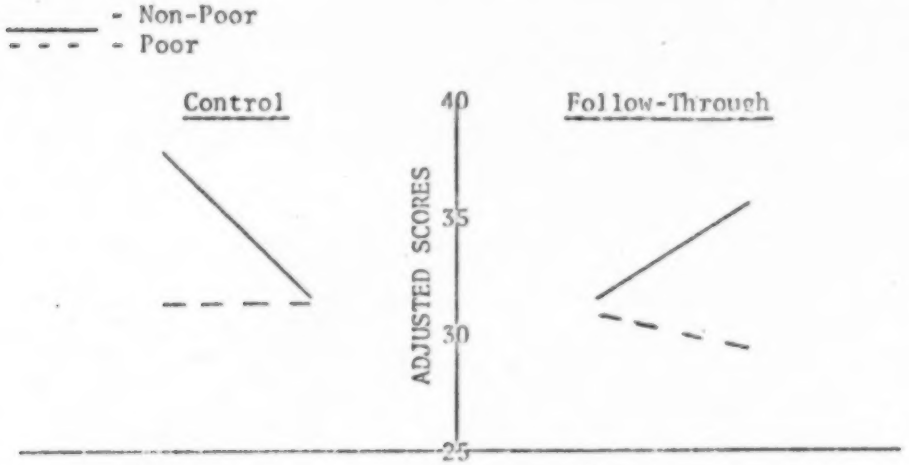
- Overall group difference was highly significant ($p < .05$).
- One out of seven dependent variables contributed significantly to the overall group difference.

[1] Multivariate and Stepdown F-Values based on mean scores adjusted for unequal number of cases and effects of pre-test measures.

Pictorial illustration of the interaction effects on language skills indicated that the influence of economic status and preschool experiences varied for Follow-Through and control children (Figure 1).

FIGURE 1

PROFILES OF INTERACTION EFFECTS OF ECONOMIC STATUS X PRESCHOOL X TREATMENT ON LANGUAGE SUBTEST



Non-Poor	38.10	32.14	31.78	35.68
Poor	31.33	31.49	30.98	29.51

- In Follow-Through classes, preschool experiences appeared to have a positive impact on language performance of Non-Poor children. The reverse was noted in the control school, where absence of preschool experiences among Non-Poor children tended to result in higher language scores.
- In both schools, Poor children functioned at a comparable level, regardless of whether they had preschool experience or not.

b. Reading Impact Project

Differences between children with and without preschool experiences were not significant (Table 10).[1]

TABLE 10

ADJUSTED MEAN SCORES AND STEPDOWN F-VALUE: NO PRESCHOOL VS. PRESCHOOL*

Variable	No Preschool	With Preschool	Stepdown F
Gates-MacGinitie			
Vocabulary	51.88	52.17	0.45
Comprehension	52.11	52.93	0.05
Attendance	165.80	169.40	3.61

* Multivariate F-Value = 1.37, $p < .25$

- Differences in basic reading skills were not significant.
- Differences in attendance between children with and without preschool experiences in favor of those with preschool experiences, almost met level of significance ($p < .01$).

[1] Multivariate and Stepdown F-Values based on mean scores adjusted for unequal number of cases and effects of pre-test measures.

APPENDICES

APPENDIX A

A-1

SPRING 1965 CHILD DEVELOPMENT CENTERS

Case-Woodland

Hicks

Tremont

A-2

1965-1966 CHILD DEVELOPMENT CENTERS

Anton Grdina

Case-Woodland

Doan

Hicks-Relief

Hough

Louis Pasteur

Margaret A. Ireland

Scranton

Tremont

Washington Irving

Willow

Wooldridge

A-3

1966-1967 CHILD DEVELOPMENT CENTERS

Alfred A. Benesch
Anton Grdina
Barkwill
Bolton
Charles H. Lake
Chesterfield
Crispus Attucks
Doan
Dunham
Longwood
Louis Pasteur
Margaret A. Ireland
Mary L. Martin
Mills
Mound
Mount Pleasant
Orchard
Paul L. Dunbar
Quincy
Rosedale
Scranton
Stanard
Stephen E. Howe
Sterling
Tremont
Tremont-Valley View
Washington Irving
William H. McGuffey
Willow
Woodland
Wooldridge

1967-1968 CHILD DEVELOPMENT CENTERS

Alfred A. Benesch
Anton Grdina
Barkwill
Bolton
Charles H. Lake
Charles Orr
Charles J. Chesnutt
Crispus Attucks
Daniel E. Morgan
Doan
Dunham
East Madison
George W. Carver
Glenville
Hicks-Riverview
Hough
John Burroughs
John D. Rockefeller
Longwood
Louis Pasteur
Margaret A. Ireland
Mary B. Martin
Mills
Mount Pleasant
Orchard
Paul L. Dunbar
Quincy
Rosedale
Scranton
Stanard
Stephen E. Howe
Sterling
Tremont
Wade Park
Washington Irving
William H. McGuffey
Willow
Woodland
Wooldridge

A-5

1968-1969 CHILD DEVELOPMENT CENTERS

Alfred A. Benesch
Anton Grdina
Bolton
Charles H. Lake
Charles Orr
Chesterfield
Crispus Attucks
Daniel E. Morgan
Doan
Dunham
East Madison
George W. Carver
Glenville
Hicks-Riverview
Hough
John Burroughs
John D. Rockefeller
Kentucky
Longwood
Louis Pasteur
Margaret A. Ireland
Marion
Mary B. Martin
Mount Pleasant
Paul L. Dunbar
Quincy
Rosedale
Rutherford B. Hayes
Scranton
Stanard
Stephen E. Howe
Sterling
Tremont
Wade Park
Washington Irving
Woodland
Wooldridge

1969-1970 CHILD DEVELOPMENT CENTERS

Alfred A. Benesch
Anton Gidina
Bolton
Boulevard
Charles H. Lake
Charles Orr
Chesterfield
Crispus Attucks
Daniel E. Morgan
Doan
Dunbar
East Madison
George W. Carver
Giddings
Glenville
Hicks
Hough
John Burroughs
John D. Rockefeller
Longwood
Louis Pasteur
Margaret A. Ireland
Mary B. Martin
Mount Pleasant
Paul L. Dunbar
Quincy
Rosedale
Scranton
Stanard
Stephen E. Howe
Sterling
Tremont
Wade Park
Washington Irving
William H. McGuffey
Woodland
Wooldridge

A-7

1970-1971 CHILD DEVELOPMENT CENTERS

Alfred A. Benesch
Anton Grdina
Bolton
Boulevard
Charles H. Lake
Charles Orr
Charles W. Chesnutt
Crispus Attucks
Daniel E. Morgan
Doan
Dunham
East Madison
George W. Carver
Giddings
Glenville
Hicks
Hough
John Burroughs
John D. Rockefeller
Longwood
Louis Pasteur
Margaret A. Ireland
Mary B. Martin
Mount Pleasant
Paul L. Dunbar
Quincy
Rosedale
Scranton
Stanard
Stephen E. Howe
Sterling
Tremont
Wade Park
Washington Irving
William H. McGuffey
Woodland
Wooldridge

A-8

1971-1972 CHILD DEVELOPMENT CENTERS

Alfred A. Benesch
Anton Grdina
Bolton
Buhrer
Captain A. Roth
Charles H. Lake
Charles Orr
Charles W. Chesnutt
Crispus Attucks
Daniel E. Morgan
Dike
Doan
Dunham
East Madison
George W. Carver
Giddings
Glenville
Hazeldell
Hicks
Hough
John Burroughs
John D. Rockefeller
John W. Raper
Joseph F. Landis
Longwood
Louis Pasteur
Margaret A. Ireland
Mary B. Martin
Miles Standish
Mount Pleasant
Paul L. Dunbar
Quincy
Rosedale
Stanard
Stephen E. Howe
Sterling
Tremont
Wade Park
Washington Irving
William H. McGuffey
Wooldridge

APPENDIX B

APPENDIX B-1

TEST MEASURES UTILIZED IN THIS EVALUATION STUDY

Tests of Basic Experiences

Language

Deals with basic concepts as vocabulary, sentence structure, verb tense, sound-symbol relationships, and letter recognition. It contains items pertaining to listening skills and perception of symbols, and makes use of "nonsense" words where the child derives their meaning from the context of the sentence.

Mathematics

Assesses child's mastery of fundamental arithmetic concepts and his ability to see relationships between objects and quantitative terms.

General Concepts

Measures grossly child's experiences and familiarity with various concepts.

Science

Assesses child's early scientific observations and the extent of his experiences with animals, humans, plants, machinery, and other phenomena.

Social Studies

Assesses child's knowledge of social groups, social roles, social customs, rules of safety, and human emotions.

Stanford Early School Achievement Test

Environment

Taps child's knowledge of the immediate and social environment which is usually absorbed from his immediate surroundings.

Mathematics

Taps child's knowledge of basic arithmetical concepts including conservation of numbers, space, and volume, counting, measurement, numeration, and classification.

Letters and Sounds

Taps child's ability to recognize upper-and lower-case letters and the auditory perception of beginning sounds.

Aural Comprehension

Taps child's ability to recognize, to pay attention, to organize, interpret, infer, and obtain what has been heard.

Metropolitan Readiness Tests

Word Reading

Measures the child's level of verbal concepts.

Listening

Taps the child's ability to comprehend phrases and sentences.

Matching

Measures the child's level of perceptual skills, e.g. discrimination of word forms in beginning reading.

Alphabet

Measures the child's ability to recognize alphabets which are verbally spoken.

Numbers

Measures the child's stock of number concepts, number knowledge, ability to manipulate quantitative relationships, recognition of, and ability to produce number symbols.

Copying

Measures the child's usual perception and motor control called for in skills like handwriting.

Stanford Primary I and II

Word Reading (I-II)

Measures the ability of a pupil to analyze a word without the aid of a context.

Paragraph Meaning (I-II)

Provides a functional measure of the child's ability to comprehend paragraphs ranging in lengths from simple sentences to paragraphs of six sentences, and involving levels of comprehension from simple recognition to making inferences.

Vocabulary (I)

Measures the child's knowledge of synonyms, of simple definitions and of reading associations, higher level of comprehension of concepts.

Arithmetic (I-II)

Measures the child's understanding of standard measurements, his ability to do simple computations and to understand the language of the problems.

Science and Social Studies (II)

Measures the child's vocabulary in science and social studies area independent of his reading skills.

Language (II)

Measures the child's knowledge of capitalization and punctuation, and usage of verb forms, pronouns, adverbs, adjectives, etc.

DIRECTIONS FOR ADMINISTERING THE TEST OF SELF CONCEPT

WE ARE GOING TO PLAY A GAME WITH THE PICTURES AND THE COLORED PAPER. SIT VERY STILL WHILE I TELL YOU HOW TO PLAY THIS GAME.

NOW LISTEN CAREFULLY. LOOK AT THE TOP OF YOUR PAPER (point to pictures). HERE IN THE CIRCLE (going to each child's picture in turn) IS YOUR OWN PICTURE. IN THE SQUARE (point) IS A PICTURE OF SOMEONE ELSE. IT MIGHT BE A PICTURE OF SOMEONE YOU WANT. IT COULD EVEN BE A PICTURE OF ONE OF YOUR FRIENDS. IN THE CIRCLE IS YOUR OWN PICTURE. IN THE SQUARE IS A PICTURE OF SOMEONE YOU MIGHT KNOW. Point to each in turn.

LISTEN.

I AM GOING TO SAY SOMETHING ABOUT SOMEONE. IF YOU THINK I AM TALKING ABOUT YOU, YOU WOULD PUT A MARK IN THE CIRCLE RIGHT UNDER YOUR PICTURE. IF YOU THINK I'M TALKING ABOUT SOMEONE YOU KNOW, YOU WOULD PUT A MARK IN THE SQUARE (point).

LISTEN, AND I WILL SAY IT AGAIN. (Repeat above instructions.)

NOW IF I SAY "WHICH BOY IS WEARING THE RED SWEATER" (Teacher here illustrates by selecting an article of clothing characteristic of one boy or girl and indicating how he would mark under his own picture, and all other children would mark under the second picture.)

NOW IF I SAY "WHICH CHILD HAS A SISTER AT HOME?" WHAT WOULD YOU DO? WHO HAS A SISTER AT HOME? THEN YOU WOULD MARK UNDER YOUR OWN PICTURE. WHO DOESN'T HAVE A SISTER AT HOME? THEN YOU WOULD MARK UNDER THE PICTURE OF YOUR FRIEND IN THE SQUARE. YOU ALL HAVE FRIENDS WHO HAVE SISTERS AT HOME.

NOW WE ARE READY TO BEGIN MARKING THE PAPER. LISTEN CAREFULLY WHILE I SAY THE FIRST THING. REMEMBER, IF IT IS ABOUT YOU, MAKE A MARK LIKE THIS (X) OR THIS (/) IN THE CIRCLE UNDER YOUR PICTURE. IF I AM TALKING ABOUT ONE OF YOUR FRIENDS OR SOMEONE YOU KNOW, MAKE A MARK LIKE THIS (X) OR (/) IN THE SQUARE UNDER THE OTHER PICTURE.

Make sure all children have the red sheet face up, and say:

WHICH CHILD LIKES TO RIDE A BICYCLE?

(Teacher should help each child individually by asking, "DO YOU LIKE TO RIDE A BICYCLE" and making sure he marks under the correct picture.)

LET'S TURN TO THE BLUE PAGE.

WHICH CHILD DOES NOT LIKE TO READ? IS IT YOU OR ONE OF YOUR FRIENDS? WHICH CHILD DOES NOT LIKE TO READ? (Teacher should help each child, making sure all understand the nature of the task. . .

Continue reading the statements in the order in which they appear below. Give whatever help is necessary so children understand the directions, repeating "IS IT YOU, OR IS IT SOMEONE YOU KNOW. IF IT'S YOU, MARK IN THE CIRCLE UNDER YOUR PICTURE. IF IT'S ONE OF YOUR FRIENDS OR SOMEONE YOU KNOW, MAKE A MARK IN THE SQUARE," AFTER EACH QUESTION. The questions themselves may be repeated more than once if necessary.

Each question below is coded to a colored sheet. The administrator should tell the children to "turn to the yellow sheet" "turn to the green sheet" and make certain that all are working on the proper colored sheet at the same time.

TEST QUESTIONS

Yellow Sheet:	1.	Which child likes to spend a lot of time close to the teacher?
Green Sheet:	2.	Which child does not like to talk very much?
White Sheet:	3.	Which child likes to take things home to show his mother?
Purple Sheet:	4.	Which child likes to play new games best?
Orange Sheet:	5.	Which child gets very frightened of being scolded?
Grey Sheet:	6.	Which child likes to play alone?
Beige Sheet:	7.	Which child likes to play hard games?
White Sheet:	8.	Which child sometimes cries when he is hurt?
Red Sheet:	9.	Which child likes the teacher to hang up his work?
Blue Sheet:	10.	Which child gets real mad if the teacher stops a game of his?
Yellow Sheet:	11.	Which child do the other boys and girls like to play with?
Green Sheet:	12.	Which child sometimes likes to stay home from school and play?
White Sheet:	13.	Which child feels angry if another child breaks his toy?
Purple Sheet:	14.	Which child does not play with his mother and father?
Orange Sheet:	15.	Which child does not talk very good?
Grey Sheet:	16.	Which child likes to play easy games?
Beige Sheet:	17.	Which child likes to come to school?
White Sheet:	18.	Which child likes to be noticed?

APPENDIX B-2

OBSERVED MEAN SCORES FOR COVARIATES
AND INDEPENDENT VARIABLES

Variable	No Preschool (N=211)	With Preschool (N=72)
Covariate		
Metropolitan Readiness	62.44	63.20
Dependent		
Gates-MacGinitie Vocabulary	51.78	52.26
Gates-MacGinitie Comprehension	52.03	53.02
Attendance	165.80	169.50

APPENDIX C

APPENDIX C-1

SUMMARY OF CHILD DEVELOPMENT TEACHER QUESTIONNAIRE RESPONSES
1971-1972

1. What do you think were the major priorities of the Child Development Project during the 1971-1972 school year (list two to three)?

   The three most frequently listed priorities were as follows:

   . Parent involvement.
   . Individualized instruction.
   . Staff development.

2. Please give an example of a technique you have used to provide individualized instruction to the children in your classroom.

   Techniques listed most frequently by teachers as ways of providing individualized instruction included the following:

   . Learning centers.
   . Use of auxiliary personnel to assist teachers.
   . Creative use of games.

3. Have you and the Kindergarten Enrichment teacher coordinated your instructional efforts during the 1971-1972 school year?

   50% Yes 47% No 3% No Response

   Approximately one out of every two Child Development teacher respondents indicated a coordination of instructional efforts with the Kindergarten Enrichment teacher. Coordination between the Child Development and Kindergarten Enrichment teachers was done in several ways:

   . Exchange of information pertaining to children who had been in Child Development classes during informal rap sessions.

   . Class visitations.

   . Sharing of ideas and equipment.

   . Field trips jointly scheduled.

   The 15 respondents who responded 'No,' commented that factors such as limited time, as well as personal attitudes prevented efforts at coordinated instruction.

4. Please check (/) the one component which needs strengthening from the following supportive service components:

22%	Psychology
31%	Social work
--	Medical-nursing
9%	Dental-dental hygienist
28%	Parent involvement
10%	No response

The three components listed most frequently were as follows:

- Social work.
- Parent involvement.
- Psychology.

Respondents' comments alluded to the following:

- Need for more staff in order to respond more immediately to call for help.
- More time to be allotted to interpretation of test information.
- Need for social workers to spend more time in the classroom.

5. The activities below represent on-going parent involvement activities. Under the second column, please indicate with a checkmark (/) if these parent activities are on-going in your classroom.[1]

Under the third column, please rank in order of frequency (5 as most frequent if No Other activity is added on to the list, 6 as most frequent if Other activity has been included, and 1 as least frequent) the indicated parent activities.

Under the fourth column, please rank in order of frequency (5 as most frequent if No Other activity is added on to the list, 6 as most frequent if Other activity has been included, and 1 as least frequent) the indicated parent activities.

Parent Activity	(/)	Frequency	Preference
Classroom visits	___	___	___
Parent conferences	___	___	___
Parent group meetings	___	___	___
Chaperones to field trips	___	___	___
Parent advisory boards	___	___	___
Other _____	___	___	___

[1] Question 5 appeared to be a vaguely-worded question based on teachers' reactions. Approximately 40-45% of the 32 respondents gave responses to these questions.

The most frequent parent activities in the classroom according to teachers are listed in the following rank order:

- Parents' classroom visits.
- Parent conferences.
- Parent group meetings.
- Parents serving as chaperones on field trips.
- Parents in advisory boards.

6. Did you feel that parent involvement activities remain at the same level throughout the year?

   22% Yes 78% No

   Approximately eight out of every ten respondents indicated that parent involvement activities did not remain at the same level throughout the year. Majority of these respondents indicated that parent involvement was at its peak between September and December.

7. Please indicate by a checkmark (/) the most effective feature of the Child Development Project:

   69% Teacher assistant per classroom.
   9% Parent involvement.
   6% Additional instructional supplies.
   3% In-service sessions.
   -- Availability of psychological services.
   -- Availability of social work services.
   -- Availability of medical-dental services.
   13% Availability of tutors.

   Approximately seven out of every ten respondents indicated that the addition of a teacher assistant per classroom represented the most effective feature of the Project.

8. Please indicate by a checkmark (/) the least effective feature of the Child Development Project:

   3% Teacher assistant per classroom.
   19% Parent involvement.
   9% Additional instructional supplies.
   9% In-service sessions.
   21% Availability of psychological services.
   6% Availability of social work services.
   6% Availability of medical-dental services.
   6% Availability of tutors.
   21% No response.

   Teacher respondents were varied in their opinions as to what constitutes the least effective features. However, the two components listed to be least effective by approximately two out of every ten respondents included:

   - Parent involvement.
   - Availability of psychological services.

9. How would you strengthen it?

Suggestions for strengthening these components included the following:

- Hiring of more psychologists and more social workers.
- Clarification of job description of social workers.
- More constructive in-service training for volunteers, tutors, etc.

10. Have you altered your teaching style this year?

91% Yes 9% No

Nine out of every ten respondents indicated that their teaching style has been altered during the 1971-1972 school year. These respondents indicated that the implementation of learning centers as a way to provide individualized instruction represented some change.

11. Please indicate the degree to which the Teacher Consultant has been helpful to you as a Child Development Teacher.

35% Extremely helpful
44% Helpful
9% Can't tell
6% Not helpful
6% No response

Approximately eight out of every ten respondents indicated that the Project's Teacher Consultant has been "Helpful" in varying degrees.

12. Please indicate the areas in which you would like to work with a Teacher Consultant in the future.

The areas listed frequently by the teacher respondents were as follows:

- Implementation and use of learning centers.
- Assistance in the use of new techniques and new materials.
- Assistance in lesson planning.
- Assitance in teaching the above average and the below average.

13. Please indicate the workshops which were most helpful to you as a Child Development teacher (list one to two) and why.

The workshops listed most frequently to be very helpful were as follows:

- Individualized learning workshops.
- Music (Ella Jenkins).

14. List one specific area which should be included in future in-service workshops:

The areas listed most frequently included:

- Conferences with parents - parent involvement efforts.
- Music
- Classroom materials and activities.
- Human relations.

15. How are you using your auxilliary help?

Respondents indicated that the auxilliary help was utilized as follows:

- Tutor - worked with boys in small group activities.
- Teacher Assistant - assists the teacher in all areas of instruction but especially in small group instruction.
- Volunteer - works in all areas also including small-group activities, in special centers, as well as with art lessons.

16. Please indicate the degree of your satisfaction in regard to the training of the following:

Degree	Teacher Assistant	Tutor	Volunteer
Extremely Satisfied	47%	38%	22%
Moderately Satisfied	25%	22%	24%
Satisfied	9%	31%	38%
Not Satisfied	19%	9%	16%

- Approximately seven out of every ten respondents were "Moderately" to "Extremely Satisfied" with the training of the teacher assistant.
- Approximately six out of every ten respondents were "Moderately" to "Extremely Satisfied" with the trairing of the tutor.
- Approximately five out of every ten respondents were "Moderately" to "Extremely Satisfied" in the training of the volunteers.

17. To what degree have the team meetings beer of help to you as a Child Development teacher?

31% Extremely Helpful
22% Moderately Helpful
41% Helpful
6% Not Helpful

Almost all respondents described the Team Meeting to be helpful to them.

APPENDIX C-2

SUMMARY OF PARENTS' RESPONSES ON TOY LIBRARY CENTERS
GIDDINGS AND DIKE (N=42)

1. How many times have you visited the Child Development classroom this year?

   Parents' reported visits ranged from 1 to 30, with the median (average) estimated at 9.

2. How many times have you visited the Toy Library Center this year?

   Parents' reported visits ranged from 1 to 30, with the average (median) estimated at 8.

3a. Have you borrowed anything from the Toy Library Center?

   Approximately 40 out of 42 parent respondents, representing 95% indicated borrowing something from the Toy Library Centers.

3b. Did you find it useful? If yes, how?

   All 40 respondents indicated they have found it useful in the following ways:

   - Reinforces child's learning of shapes, numbers, colors.
   - Helps child with 'naming' things.
   - Helps child with coordination.

4. What kind of materials would you like to see included in this toy library?

   Parents indicated satisfaction with the present selection available now. Suggestions were made about increasing the quantity of available materials.

5. Is it a good idea to have a Toy Library Center attached to the Child Development Center?

   All 42 parents favored the Toy Library Center to be a good and useful idea for parents.

6. List one recommendation to improve next year's Toy Library Center.

The most frequent recommendation was to get more parents to come, so they could take advantage of this service.